

**§ 108.477 Fire hydrants.**

(a) If a fixed foam extinguishing system has outlets in a main machinery space, at least 2 fire hydrants, in addition to the fire hydrants required by § 108.423 of this subpart, must be installed outside the entrances to the space with each at a separate entrance.

(b) Each hydrant must have enough hose to spray any part of the space.

(c) Each hydrant must have a combination nozzle and applicator.

FIRE PROTECTION FOR HELICOPTER FACILITIES

**§ 108.486 Helicopter decks.**

At least two of the accesses to the helicopter landing deck must each have a fire hydrant on the unit's fire main system located next to them.

**§ 108.487 Helicopter deck fueling operations.**

(a) Each helicopter landing deck on which fueling operations are conducted must have a fire protection system that discharges protein foam or aqueous film forming foam.

(b) a system that only discharges foam must—

(1) Have enough foam agent to discharge foam continuously for at least 5 minutes at maximum discharge rate;

(2) Have at least the amount of foam agent needed to cover an area equivalent to the swept rotor area of the largest helicopter for which the deck is designed with foam at—

(i) If protein foam is used, 6.52 liters per minute for each square meter (.16 gallons per minute for each square foot) of area covered for five minutes;

(ii) If aqueous film forming foam is used, 4.07 liters per minute for each square meter (.1 gallons per minute for each square foot) of area covered for five minutes; and

(3) Be capable of discharging from each hose at 7 kilograms per square centimeter (100 pounds per square inch) pressure—

(i) A single foam stream at a rate of at least 340 liters (90 gallons) per minute; and

(ii) A foam spray at a rate of at least 190 liters (50 gallons) per minute.

(c) Each system must have operating controls at each of its hose locations,

be protected from icing and freezing, and be capable of operation within 10 seconds after activation of its controls.

(d) Each system must have at least one hose at each of the two access routes required by § 108.235(f) of this part. Each hose must be reel mounted and long enough to cover any point on the helicopter deck. Each hose that discharges foam must have a nozzle that has foam stream, foam spray, and off positions.

**§ 108.489 Helicopter fueling facilities.**

(a) Each helicopter fueling facility must have a fire protection system that discharges one of the following agents in the amounts prescribed for the agents over the area of the fuel containment systems around marine portable tanks, fuel transfer pumps and fuel hose reels:

(1) Protein foam at the rate of 6.52 liters per minute for each square meter (.16 gallons per minute for each square foot) of area covered for five minutes.

(2) Aqueous film forming foam at the rate of 4.07 liters per minute for each square meter (.1 gallon per minute for each square foot) of area covered for five minutes.

(3) 22.5 kilograms (50 pounds) of dry chemical (B-V semi-portable) for each fueling facility of up to 27.87 square meters (300 square feet).

(b) If the fire protection system required by § 108.487 of this subpart is arranged so that it covers both a helicopter fueling facility and a landing deck, the system must have the quantity of agents required by this section in addition to the quantity required by § 108.487.

HAND PORTABLE AND SEMI-PORTABLE FIRE EXTINGUISHING SYSTEMS

**§ 108.491 General.**

Each hand portable and semiportable fire extinguisher on a unit must be approved under Subpart 162.028 or 162.039 of this chapter.

**§ 108.493 Location.**

(a) Each unit must have the hand portable and semiportable fire extinguishers prescribed in Table 108.495(a) of this subpart and installed in the locations prescribed in the table.

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(b) Each portable and semi-portable fire extinguisher must be visible and readily accessible.

(c) The location, size, and number of each portable and semiportable fire extinguisher on a unit must be acceptable to the appropriate OCMI. The OCMI may require extinguishers in addition to those prescribed in Table 108.495(a) if he considers them necessary for fire protection on the unit.

(d) Each hand portable and semiportable fire extinguisher that has a nameplate which states that it is to be protected from freezing, must be lo-

cated where freezing temperatures do not occur.

**§ 108.495 Spare charges.**

(a) Each unit must have enough spare charges for 50 percent of the hand portable fire extinguishers required under Table 108.495(a) of this subpart that are rechargeable by personnel on the unit.

(b) If a unit has extinguishers that cannot be recharged by personnel on unit, it must also have at least one spare extinguisher for each classification and variety of those extinguishers.

**TABLE 108.495(a)—HAND PORTABLE FIRE EXTINGUISHERS AND SEMI-PORTABLE FIRE-EXTINGUISHING SYSTEMS**

Space	Classification (see table 108.495(b))	Quantity and location
<b>SAFETY AREAS</b>		
Wheelhouse and control room .....	C-I .....	2 in vicinity of exit.
Stairway and elevator enclosure .....	.....	None required.
Corridors .....	A-II .....	1 in each corridor not more than 150 ft (45 m) apart. (May be located in stairways.)
Lifeboat embarkation and lowering stations .....	.....	None required.
Radio room .....	C-I .....	2 in vicinity of exit.
<b>ACCOMMODATIONS</b>		
Staterooms, toilet spaces, public spaces, offices, lockers, small storerooms, and pantries, open decks, and similar spaces.	.....	None required.
<b>SERVICE SPACES</b>		
Galleys .....	B-II or C-II .....	1 for each 2,500 ft <sup>2</sup> (232 m <sup>2</sup> ) or fraction thereof suitable for hazards involved.
Paint and lamp rooms .....	B-II .....	1 outside each room in vicinity of exit.
Storerooms .....	A-II .....	1 for each 2,500 ft <sup>2</sup> (232 m <sup>2</sup> ) or fraction thereof located in vicinity of exits, either inside or outside the spaces.
Work shop and similar spaces .....	C-II .....	1 outside each space in vicinity of an exit.
<b>MACHINERY SPACES</b>		
Oil-fired boilers: Spaces containing oil-fired boilers, either main or auxiliary, or their fuel oil units.	B-II .....	2 required in each space.
Internal combustion or gas turbine propelling machinery spaces.	B-V .....	1 required in each space.
	B-II .....	1 for each 1,000 brake horsepower but not less than 2 nor more than 6 in each space.
	B-III .....	1 required in each space. See note 1.
Motors or generators of electric propelling machinery that do not have an enclosed ventilating system.	C-II .....	1 for each motor or generator.
Motors and generators of electric propelling machinery that have enclosed ventilating systems.	.....	None required.
<b>AUXILIARY SPACES</b>		
Internal combustion engines or gas turbine .....	B-II .....	Outside the space containing engines or turbines in vicinity of exit.
Electric emergency motors or generators .....	C-II .....	1 outside the space containing motors or generators in vicinity of exit.
Steam driven auxiliary machinery .....	.....	None required.
Trunks to machinery spaces .....	.....	Do.
Fuel tanks .....	.....	Do.
<b>MISCELLANEOUS AREAS</b>		
Helicopter landing decks .....	B-V .....	1 at each access route.
Helicopter fueling facilities .....	B-IV .....	1 at each fuel transfer facility. See note 2.